

REMARKS

Please enter this amendment after filing the RCE in this case, after entry of the amendment mailed January 21, 2004, and before any action on the merits. This is a supplement to the amendment filed with a certificate of mailing dated January 21, 2004, which also is being entered upon filing the RCE. In an advisory action mailed May 11, 2004, the Examiner stated that the proposed amendment to recite "no less than" does not obviate his analysis that the Wu reference teaches the recited range. Further, the Examiner has stated that applicants' have not shown their range is critical in order to distinguish over the reference. Reconsideration of the rejection and allowance of the claims is earnestly solicited.

The silicon with 18% germanium of Wu forms an alloy and that is different in kind applicants' silicon with 1% germanium.

Fig. 1D of Wu discloses a silicon substrate 132 with an epitaxial SiGe etch stop 134 on it. There are gradient layers of increasing amounts of germanium and boron where the layers closest to the substrate 132 do not function as an etch stop. Only when Wu gets to high levels of germanium does the etchant exist. Column 9, lines 44 and following show that the material of Fig. 1D has 34% germanium, no doping of Boron, and it functions as a good etch stop. Previously on lines 39-41 Wu states, "Regardless, it is clear that the boron doping does not approach the levels needed for etch stopping.

There are three distinct systems under consideration here:

1. Prior art systems with heavy boron doped in silicon that has been found to be ineffective.
2. Wu, who uses lightly doped or non doped silicon with germanium of at least 18% and preferably 30%.
3. Applicants, who uses the prior art heavy doped boron in silicon with the addition of 1% germanium to achieve proper etching as noted in the specification.

Wu specifically states in the abstract that silicon is etched when the silicon is "any silicon containing less than $7 \times 10^{19} \text{cm}^{-3}$ of boron or undoped $\text{Si}_{1-x}\text{Ge}_x$ alloys with x less than approximately 18." The reference is totally silent about the etching properties of silicon that is doped with heavy boron and about 1% germanium. Only applicants have discovered that heavy doping with boron and a small amount of germanium is effective.



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The Examiner has cited Wu at column 10, lines 20-25 as showing a low concentration of germanium. This is not true if one reads Wu to say that low concentrations are etched away and do not form an etch stop. That is the true reading of Wu. Reconsideration of the rejection based on Wu is respectfully urged.

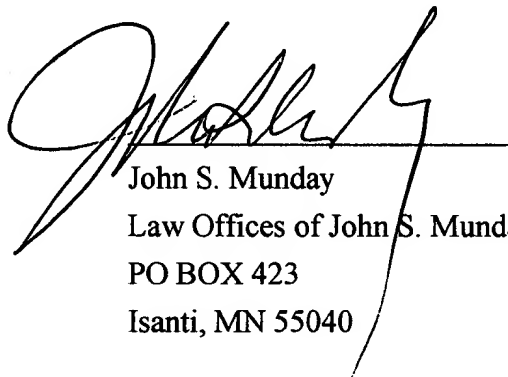
It is respectfully requested that the Examiner consider the amendments and remarks herein, and pass this application to issue. If the Examiner considers this case ready for conclusion, other than by allowance, he is respectfully requested to call Applicant's attorney at the number listed below.

Respectfully submitted,
Robert Horning et al.

DATE: July 2, 2004

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